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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,470	02/06/2004	William R. LaCourse	2254.0010001	6717

26111 7590 03/30/2005

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EXAMINER

RAEVIS, ROBERT R

ART UNIT PAPER NUMBER

2856

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,470

Applicant(s)

LACOURSE ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-9 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-9 and 20-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "contact with a soil surface" (claim 25) and "contact with a liquid surface" (claim 26) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 25,26 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 25, is the "soil surface" somehow a structural limitation in this "apparatus" claim? How is the "soil" part of the apparatus? Doesn't this claim only add an intended use of the claimed apparatus?

As to claim 26, is the "liquid surface" somehow a structural limitation in this "apparatus" claim? How is the "liquid" part of the apparatus? Doesn't this claim only add an intended use of the claimed apparatus?

Claims 1,8,9,25,26,21,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom et al in view of Davis et al in view of Liang et al. and further in view of Neal.

Sjostrom et al teach (Figure 1) a system employing: filter 42 with support, heater 35 for the filter, and sample extraction lines 48,49. The sampled "mercury" (col. 1, line 1) is analyzed. The filter passes gas for analysis, and has tiny pores to prevent passage of particulates greater than a predetermined minimal size.

Sjostrom does not refer to vacuum, state that the porous metal is semi-permeable, and does not clearly state that the analyzer is in fluid communication with the filter.

As to claims 1,8,9,21, it would have been obvious to employ a semi-permeable membrane carried on a perforated metal tube in place of Sjostrom's three tube system ("sintered porous metal tube" (col. 2, lines 60-61, of Sjostrom) 42, and the two pipes 41,41 connected to the ends of tube 42) because Davis teaches that a single tube will permit for a "semi-permeable membrane" (col. 1, line 29) filter in its middle portion, which is easier to construct than Sjostrom's three tube system. Also, it would have

been obvious to connect a gas chromatograph directly to extraction lines 48,49 because Liang et al teach (first page, right hand col., line 4) that a *GC may detect mercury*. GC's employ vacuum to pass samples. In addition, it is known to utilize sample valves (with loops) to remove a predetermined volume of sample for GC analysis. Finally, note that Neal plainly illustrates (Figure 1) how a sample is drawn through a line 20 to a sample valve in a GC system by "vacuum", necessarily employing a loop to obtain a predetermined volume of sample for analysis, as required for the gas chromatograph.

As to claim 21, the filter 44 blocks "bulk flow" of solids.

As to claims 25 and 26, the claim is expressly directed to an "apparatus" (line 1), and thus the particular uses cited are only intended uses. Regardless, note that Sjostrom's filter does contact liquid.

Claims 5,6,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom et al in view of Davis et al in view of Liang et al. and further in view of Neal as applied against claim 1, and further in view of Skarstrom et al

As to claims 5,6,21, membranes commonly employ polymer material to effectively filter fluids. Regardless, Skarstrom et al teach use of tetrafluoroethylene as a successful material for semi-permeable membrane material. (See col. 12, lines 33-45).

Claims 5,6,21-24,27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom et al in view of Davis et al in view of Liang et al. and further in view of Neal as applied to claim 1, and further in view of Boggs et al.

As to claims 5,6,21-24,27-29 it would have been obvious to employ a steel screen coated with tetrafluoroethylene polymer as Davis's membrane because Boggs et

al teach use of a steel mesh coated with TEFLON to filter out smaller particles. (See col. 1, lines 27-30; col. 2, lines 40-48) .

Claims 1,5,7,8,25,26,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traina et al '432 in view of Wong and father in view of Sohma et al.

Traina teaches (Figure 1) an apparatus, including: heated sintered metal filter 24 through which sample is drawn via a pump 10. The sample passes through a chiller 18 (i.e. trap) and analyzer 22.

Traina does not state that the filter is a semipermeable membrane, and does not refer to a gas chromatograph.

As to claims 1,5,7,8,25,26,20, it would have been obvious to employ a semipermeable membrane as Tran's filter 24 because Wong teaches (col. 2, lines 1-5; col. 7, lines 15-20) use of a membrane to effectively filter out particles for an exhaust gas sensing system. In addition, it would have been obvious to employ a gas chromatograph as Traina's analyze because Sohma teaches (col. 5, lines 45-50) that a gas chromatograph will accurately test exhaust gases.

Claims 5,6,21-24,27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traina et al '432 in view of Wong and further in view of Sohma et al. as applied to claim 1, and further in view of Boggs et al.

As to claims 5,6,21-24,27-29, it would have been obvious to employ a steel screen coated with tetrafluoroethylene polymer as Wong's membrane because Boggs

et al teach use of a steel mesh coated with TEFLON to filter out smaller particles. (See col. 1, lines 27-30; col. 2, lines 40-48).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Traina et al '432 in view of Wong and further in view of Sohma et al. as applied to claim 1, and further in view of Neal.

As to claim 9, Neal plainly illustrates (Figure 1) how a sample is drawn through a line 20 to a sample valve in a GC system by "vacuum", necessarily employing a loop to obtain a predetermined volume of sample for analysis, as required for the gas chromatograph.

Regarding Applicant's Remarks, consider the following:

The phrase 'semipermeable membrane' is a common term. Applicant's attempt to provide it with a different (maybe more narrow) meaning cannot be accepted, as the term already has a common meaning as applied above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raavis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 6:30am to 4pm. Supervisor is Hezron Williams at 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rowe
RAVIS